



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/588,543

08/07/2006

Tsuyoshi Isomura

2006_1282A

8272

52349 7590 10/10/2008
WENDEROTH, LIND & PONACK L.L.P.
2033 K. STREET, NW
SUITE 800
WASHINGTON, DC 20006

EXAMINER

DUBASKY, GIGIL

ART UNIT

PAPER NUMBER

4126

MAIL DATE

DELIVERY MODE

10/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,543	Applicant(s) ISOMURA ET AL.	
	Examiner GIGI DUBASKY	Art Unit 4126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/06/2008, 08/07/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 27 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 27 defines a recording medium – embodying functional descriptive material - storing a broadcast receiving program in executable form that causes a computer to function.... However, the claim does not define any structural and functional interrelationships between the broadcast receiving program and other claimed elements of a computer which permit the computer broadcast receiving program's functionality to be realized and is thus non-statutory for that reason.

Because the full scope of the claim as properly read in light of the disclosure encompasses non statutory subject matter, the claim as whole is non-statutory under the present USPTO Interim Guidelines (Interim Guidelines, pages 52-53 and M.P.E.P 2106.01).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 4126

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 15-17, 23-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Shikakura et al (US 6108379).

Regarding claim 15, Shikakura discloses a broadcast receiving apparatus (Col 4, lines 1-3) comprising:

a receiver which receives a first TV broadcast signal and a second TV broadcast signal (elements 201 and 202 in Figure 1 and Figure 7; Col 4, lines 5-11 and Col 8, lines 16-22, but not limited to);

a first decoder which decodes the first TV broadcast signal received by the receiver (element 204 and 206 in Figure 1 and Figure 7; Col 4, lines 18-22, 30-34, Col 8, lines 27-32 and 39-43, but not limited to);

a second decoder which decodes the second TV broadcast signal received by the receiver (element 203 and 205 in Figure 1 and Figure 7; Col 4, lines 11-15, 25-27, Col 8 lines 22-25 and 33-39, but not limited to);

a detector which detects a decoding error part of the first TV broadcast signal decoded by the first decoder (element 211 and 212 in Figure 1 and Figure 7; Col 4, lines 51-55, and Col 5, lines 48-67, but not limited to); and

a synthesizer which generates a composite signal obtained by replacing the decoding error part of the first TV broadcast signal detected by the detector with a corresponding part of the second TV broadcast signal decoded by the second decoder (element 215 in Figure 7; Col 8, lines 44-51 and Col 9, lines 8-13, but not limited to).

Art Unit: 4126

Regarding claim 16, Shikakura discloses the apparatus as discussed in the rejection of claim 15. Shikakura further discloses at least one of the first decoder and the second decoder decodes the TV broadcast signal with use of the composite signal generated by the synthesizer (see elements 203, 205, 204, 206 and 215 in Figure 7; the inputs of “Band synthesization 215” are from both decoders).

Regarding claim 17, Shikakura discloses the apparatus as discussed in the rejection of claim 15. Shikakura further discloses the first decoder and the detector constitute decoding and detecting unit which decodes the first TV broadcast signal and detects the decoding error part of the first TV broadcast signal during decoding of the first TV broadcast signal to output a detection result to the synthesizer (see elements 204, 212 and 215 in Figure 7; element 204 as first decoder, element 212 as detector that detects error of signal from element 204 and outputs a result to element 215 as synthesizer) .

Regarding claim 23, Shikakura discloses the apparatus as discussed in the rejection of claim 15. Shikakura further discloses the first TV broadcast signal and the second TV broadcast signal are each a digital TV broadcast signal (Col 3, lines 23-24 and Col 4 lines 1-3, 8-11, but not limited to), and the first TV broadcast signal has a content identical to a content of the second TV broadcast signal, and provides video of a quality higher than a quality of the second TV broadcast signal (Col 3, lines 23-51, Col 4, lines 25-37, but not limited to).

Regarding claim 24, Shikakura discloses the apparatus as discussed in the rejection of claim 23. Shikakura further discloses the second TV broadcast signal is a broadcast signal for use in broadcasting under rainfall for the first TV broadcast signal (Col 1, lines 21-26, Col 4, lines 43-48, Col 5, lines 33-67 and Col 6, lines 16-46, but not limited to).

Regarding claim 25, Shikakura discloses the apparatus as discussed in the rejection of claim 15. Shikakura further discloses the first TV broadcast signal and the second TV broadcast signal are each a digital TV broadcast signal (Col 3, lines 23-24 and Col 4 lines 1-3, 8-11, but not limited to), and the first TV broadcast signal has a content identical to a content of the second TV broadcast signal, and is a signal modulated by a modulation system having a viewable receiving C/N ratio higher than a viewable receiving C/N ratio of a modulation system applied to the second TV broadcast signal (see curve B and curve C in Figure 8; Col 3, lines 23-51, Col 4, lines 55-67, Col 6, lines 9-16 and Col 7, lines 26-39, but not limited to).

Regarding claim 26, all the limitations of claim 26 are analyzed corresponding to all functionalities of claim 15. Claim 26 is rejected under the same ground as claim 15.

Regarding claim 27, claim 27 is directed toward embodying the method of claim 26 (detecting means for detecting a decoding error... and synthesizing means for

Art Unit: 4126

generating a composite signal...) in "computer recording medium". It would have been obvious to embody the procedures of Shikakura discussed with respect to claim 26 in a "computer recording medium" in order that the instructions could be automatically performed by a processor. So claim 27 is rejected corresponding to the rejection of claim 26.

Regarding claim 28, all the limitations of claim 28 are analyzed corresponding to the claim 15. Claim 28 is rejected on the same ground as claim 15.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shikakura in view of Hatabu et al (2005/0117643).

Regarding claim 18, Shikakura discloses the apparatus as discussed in the rejection of claim 15. Shikakura further discloses the synthesizer generates a composite signal obtained by replacing the decoding error part of the first TV broadcast signal detected by the detector with a corresponding part of the second TV broadcast signal (element 215 in Figure 7; Col 8, lines 44-51 and Col 9, lines 8-13, but not limited to).

Shikakura does not explicitly disclose the limitations of “a first storage which stores the first TV broadcast signal, and a second storage which stores the second TV broadcast signal”.

Hatabu discloses the limitations of a first storage which stores the first TV broadcast signal (element 211-1 in Figure 3), and a second storage which stores the second TV broadcast signal (element 211-2 in Figure 3).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Shikakura’s receiver with the teaching of Hatabu about a plurality of buffers, so the reception side is not required to decode the plurality of received encoded data for the purpose of decoding the same frame or the same image area, making it possible to reduce an increase in the amount of calculations needed by the reception side (taught by Hatabu; paragraph [0040], lines 6-10).

6. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shikakura in view of Karaoguz et al (US 2005/0066089).

Regarding claim 19, Shikakura discloses all the limitations of the apparatus as discussed in the rejection of claim 15. Shikakura further discloses the first decoder and the second decoder constitute a single decoder (see Figure 1 or Figure 4 or Figure 9; “decoding apparatus 200” includes “elements 203 and 205” as the first decoder and “elements 204 and 206” as the second decoder).

Shikakura does not disclose a timesharing unit which timeshares the first TV broadcast signal and the second TV broadcast signal received by the receiver for

Art Unit: 4126

outputting, and alternately decodes the first TV broadcast signal and the second TV broadcast signal timeshared by the timesharing unit.

Karaoguz discloses a timesharing unit which timeshares the first TV broadcast signal and the second TV broadcast signal received by the receiver for outputting, and alternately decodes the first TV broadcast signal and the second TV broadcast signal timeshared by the timesharing unit ("decoder core 242" in Figure 2 includes a timeshared decoding processor; paragraph [0051], but not limited to).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Shikakura's receiver with the teaching of Karaoguz's decoder core module, so to reduce the space of circuitry and the cost of manufacture.

Regarding claim 20, Shikakura in view of Karaoguz discloses the apparatus as discussed in the rejection of claim 19. Shikakura in view of Karaoguz further discloses a first storage which stores the composite signal outputted from the synthesizer (taught by Shikakura; element 303 in Figure 3; Col 7-32, but not limited to), and a second storage which stores the second TV broadcast signal decoded by the single decoder (taught by Shikakura; element 304 in Figure 3 or element 404 in Figure 5), wherein the synthesizer is operative to store the second TV broadcast signal decoded by the single decoder in the first storage if the detector has not detected the decoding error part of the first TV broadcast signal, and is operative to read out the part of the second TV broadcast signal corresponding to the decoding error part from the second

Art Unit: 4126

storage to store the readout part in the first storage if the detector has detected the decoding error part of the first TV broadcast signal (elements 215, and 211-213 in Figure 7 have all equal functionalities as claimed limitations; Col 8, lines 63-67 and Col 9, lines 1-31, but not limited to).

Regarding claim 21, Shikakura in view of Karaoguz discloses the apparatus as discussed in the rejection of claim 20. Shikakura in view of Karaoguz further discloses the single decoder decodes the first TV broadcast signal with use of the composite signal stored in the first storage if the detector has detected the decoding error part of the first TV broadcast signal (taught by Shikakura; "decoding apparatus 200" as a single decoder, "elements 211 and/or 212" as detector; Col 5, lines 7-67, but not limited to).

Regarding claim 22, Shikakura in view of Karaoguz discloses the single decoder and the detector constitute decoding and detecting unit which decodes the first TV broadcast signal corresponding to the second TV broadcast signal after decoding the second TV broadcast signal, and detects the decoding error part of the first TV broadcast signal during decoding of the first TV broadcast signal to output a detection result to the synthesizer (see Figure 7; "decoding apparatus 200" as single decoder, elements 211 and/or 212 as detector, and element 215 as synthesizer; Col 8, lines 39-67, but not limited to).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Westerlund et al (US 6757654) teaches the forward error correction in speech coding.

Hannuksela (US 2004/0218669) teaches the picture coding method.

Nishida (US 6519007) teaches the video data transmitting method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GIGI DUBASKY whose telephone number is (571)270-5686. The examiner can normally be reached on Monday through Friday from 7:30am to 5:00pm with alternative Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on 571-272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

Application/Control Number: 10/588,543

Page 11

Art Unit: 4126

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason P Salce/
Primary Examiner, Art Unit 2623

10/08/2008

GD